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| 09/150,360 | 09/09/1998 | WILLIAM S. YERAZUNIS | MERL-1197 | 6285 |

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| EXAMINER | |
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13

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/150,360 | YERAZUNIS ET AL. | |
| | Examiner | Art Unit | |
| | Vu Le | 2613 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) 1-36 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-36 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

***Response to Arguments***

1. Pursuant to the Remand under 37 CFR 1.193(b)(1) by the Board of Patent Appeals and Interferences on December 19, 2003, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below in view of the Appeal Brief filed on August 9, 2000.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

***Allowable Subject Matter***

2. The indicated allowability of claims 1-35 is withdrawn in view of the newly discovered reference(s) to Katayama, US 5,294,978; Koen, US 5,616,863; Andersson et al, US 5,991,043. Rejections based on the newly cited reference(s) follow.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-2, 5-9, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black, US 4,835,621 in view of Katayama, US 5,294,978.

Re claim 1, Black discloses a method for recording data in response to the firing of a weapon along a target line (figs. 1-14, col. 1, line 5-10, col. 2, line 62 – col. 3, line 27), comprising the steps of:

sensing at least one discharge of said weapon with a weapon discharge sensor and in response to each respective discharge of said weapon, generating a weapon discharge sensor output signal (col. 3, lines 11-26); repeatedly storing video image data within a semiconductor memory within a video recording device mounted to said weapon in response to the detection of said weapon discharge sensor output signal (in Black, col. 3, lines 11-15, when video recording starts, image data will be repeatedly stored, and in col. 3, lines 11-15, recording starts in response to a trigger signal).

Black does not call for a semiconductor memory as a recording medium as claimed. Instead, a tape cassette serves as a recording medium (col. 7, line 29-30). Katayama however, makes it well known and uses a semiconductor memory (i.e. DRAM) as a recording medium in a system that temporally acquires sequences of images for analysis (fig. 1:32, also col. 3, line 29 – col. 4, line 31). Katayama further makes it well known and suggests the benefit of using the disclosed system utilizing said DRAM for the study of kinetics of one or more bodies or particles, including ballistics.

Taking the combined teaching of Black and Katayama as a whole, one skilled in the art would have found it obvious to replace the tape cassette in Black with the DRAM

memory in Katayama as an alternative recording medium in a firearm environment for the benefit of ballistics analysis. The advantages of using digital memory over tape cassette are also well documented in the related fields such as smaller size, fast access, random access, more robust in data preservation, to name a few.

For the limitations of:

preserving in said semiconductor memory within said video recording device, video image data corresponding generally to an area surrounding said target line (in Black, col. 3, lines 11-15, col. 7, lines 39-47, video recording onto the tape is the process of preserving video image data; Black in view of Katayama would have taught data preservation in a semiconductor memory; video recording is generally to an area of a target line since the field of view of the camera is parallel with the barrel of the gun).

For the limitations of:

some of said video image data stored preceding and subsequent to the weapon discharge sensor output signal corresponding to said at least one firing of said weapon (Black in view of Katayama would have rendered obvious these limitations as claimed, see Katayama, col. 4, line 23-31).

Re claim 2, the method of claim 1 wherein said weapon comprises a gun. (See Black, fig. 1).

Re claim 5, the method of claim 1 wherein said weapon includes a trigger operative to activate a switch and said sensing step further comprises the step of sensing the discharge of said weapon upon the sensing of a change of state of said switch. (See Black, col. 3, line 3-27).

Re claim 6, the method of claim 1 wherein said storing step further comprises the steps of: repeatedly storing video image data comprising video frames within the semiconductor memory; in response to each one of said discharge sensor output signals, preserving within said semiconductor memory, video image data corresponding to at least one frame stored within said semiconductor memory prior to the respective discharge sensor output signal and video image data corresponding to at least one frame stored within said semiconductor memory subsequent to the respective discharge sensor output signal.

(The limitations as claimed have been analyzed and rejected w/r to claim 1 above).

Re claim 7, the method of claim 6 wherein said step of repeatedly storing video image data comprising video frames within said semiconductor memory comprises the step of storing said video frames within said semiconductor memory periodically.

(The limitations as claimed have been analyzed and rejected w/r to claims 1, 2 and 5-6 above. Furthermore, Black in view of Katayama would have utilized a circular memory in which old video data are overwritten with new video data. Thus, a cycle of said circular memory would have stipulated a recording period).

Re claim 8, the method of claim 6 wherein said storing step comprises the step of storing said video image data associated with each discharge of said weapon in a portion of the semiconductor memory assigned for the respective discharge; and preserving selected video image data associated with each discharge of said weapon.

(The limitations as claimed have been analyzed and rejected w/r to claims 1, 2 and 5-6 above. Furthermore, Black teaches storing video data in response to a triggering signal, see col. 3, line 3-27. Black in view of Katayama teaches storing respectively portions of image data prior to and after the instant of the triggering signal, see Katayama, col. 4, line 25-31. Thus, each triggering signal would have resulted in storing video data associated with that particular triggering signal).

Re claim 9, the method of claim 8 wherein said portion of said semiconductor memory assigned for the storage of video data associated with each successive discharge of said weapon is smaller than the portion associated with the prior discharge of said weapon.

(The limitations as claimed have been analyzed and rejected w/r to claims 1, 2, 5-6 and 8 above. Furthermore, Black in view of Katayama teaches storing respectively portions of image data in a circular memory configuration prior to and after the instant of the triggering signal, see Katayama, col. 3, line 42-51, col. 4, line 25-31. Thus, each triggering signal would have resulted in storing video data associated with that particular triggering signal. The portion of memory used to store video data based upon the triggering signal is smaller than the portion of memory prior to the triggering event as evidenced in Katayama, see col. 4, line 27-28).

Re claim 13, the method of claim 1 wherein said storing step further comprises the steps of: repeatedly storing video image data comprising video frames within a first semiconductor memory; in response to each one of said weapon discharge sensor output signals, reading selected video image data from said first semiconductor memory

and writing said selected video image data to a second non-volatile semiconductor memory.

(The limitations as claimed have been analyzed and rejected w/r to claim 1 above. Furthermore, Black in view of Katayama would have taught reading selected video image data from the first semiconductor memory 32 and writing said selected video image data a second semiconductor memory 40. See fig. 1, col. 3, line 64 – col. 4, line 7).

**5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Black, US 4,835,621 in view of Katayama, US 5,294,978 as applied to claim 1 above and further in view of Koen, US 5,616,863.**

Re claim 3, Black in view of Katayama fails to teach the limitations of:

wherein said sensing step further comprises the step of sensing the discharge of said weapon with an accelerometer as claimed. However, Koen makes it well known and discloses the use of low cost, compact, and highly reliable mounting of an accelerometer chip as a means for activating a trigger signal commonly used for air bad deployment in a vehicle (col. 1, line 48-52, col. 3, line 25-27).

Taking the combined teaching of Black, Katayama and Koen as a whole, one skilled in the art would have found it obvious to replace a signal generator for generating a signal in response to the pull of the trigger as disclosed in Black (col. 3, line 11-15) with an accelerometer in Koen as an alternative sensing means for sensing the discharge of said weapon. Using the accelerometer chip of Koen in a firearm

environment would have provided the benefits of a low cost, compact, and highly reliable mounting of said accelerometer chip as a means for activating a trigger signal (col. 1, line 48-52, col. 3, line 25-27) since the firearm would have required a compact trigger sensing means.

**6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Black, US 4,835,621 in view of Katayama, US 5,294,978 as applied to claim 1 above and further in view of Andersson et al, US 5,991,043.**

Re claim 4, Black in view of Katayama fails to teach the limitations of:

wherein said sensing step further comprises the step of sensing the discharge of said weapon with a microphone as claimed. However, Andersson makes it well known and uses a microphone for detecting activation of the trigger of a weapon (col. 6, line 54-57).

Taking the combined teaching of Black, Katayama and Andersson as a whole, one skilled in the art would have found it obvious to replace a signal generator for generating a signal in response to the pull of the trigger as disclosed in Black (col. 3, line 11-15) with a microphone in Andersson as an alternative sensing means for sensing the discharge of said weapon. Using the microphone as taught in Andersson would have been merely an obvious design preference over the signal generator in Black which yields no finding unexpected in the prior art.

**7. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black, US 4,835,621 in view of Katayama, US 5,294,978 as applied to claim 1 above and further in view of Fielder, US 5,845,240.**

Re claim 10, Black in view of Katayama fails to teach the limitations of:

generating an audio signal with a microphone electrically coupled to said video recording device, wherein said audio signal is representative of sound within the vicinity of said weapon; and sampling said audio signal with an analog to digital converter to produce a digital data comprising a digital representation of said audio signal; and storing within said semiconductor memory at least some of said digital data extending temporally around each discharge of said weapon as claimed. However, Fielder discloses recording digital audio into semiconductor memory by sampling the audio with an analog to digital converter (col. 4, lines 34-39). The data is stored in acquisition buffers responsive to a threshold audio event (col. 5, line 63 – col. 6, line 9).

Therefore, taking the combined teaching of Black, Katayama and Fielder as a whole, one skilled in the art would have found it obvious to record digital audio into semiconductor memory by sampling the audio with a digital to analog converter as taught in Fielder for recording audio data at the vicinity of the weapon.

Re claim 11, the method of claim 10 further comprising the step of storing said digital data within said semiconductor memory employing a nonlinear quantization technique for the representation of said data.

(Fielder teaches the use of an A/D converter which is used to quantize the audio data. The quantization by the A/D is a non-linear function).

8. **Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Black, US 4,835,621 in view of Katayama, US 5,294,978 as applied to claim 1 above and further in view of Scerbo, US 5,546,124.**

Re claim 12, Black in view of Katayama fails to teach the limitations of:

generating a signal with a holster state sensor having a first state when said weapon is within a holster and a second state when said weapon is not within said holster; and storing said video data within said semiconductor memory only when said holster state sensor signal is in said second state as claimed. However, Scerbo makes it well known and obvious the arrangement as claimed (fig. 2, col. 11, line 8-23.

Taking the combined teaching of Black, Katayama and Scerbo as a whole, it would have been obvious to modify the triggering mechanism of Black in view of Katayama in order to initiate the video recording when the weapon is moved to a drawn state. This would allow for better power utilization of the device to have it in an on state only when the weapon has the potential of being used.

**9. Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Black, US 4,835,621 in view of Katayama, US 5,294,978 as applied to claims 1 and 13 above and further in view of Scerbo, US 5,546,124.**

Re claim 14, Black in view of Katayama fails to teach the limitations of:

preserving within said second semiconductor memory, said stored video image data at least until said video image data is read from said second semiconductor memory in response to a request from a user presenting a valid password to said video

recording device as claimed. However, Scerbo teaches the use of codes or passwords in order to gain access to video data which have been stored on a recording medium (col. 6, lines 35-44).

Taking the combined teaching of Black, Katayama and Scerbo as a whole, it would have been obvious to modify Black in view of Katayama to utilize password protected mechanism for the benefit of securing the data stored in the semiconductor memory.

**10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Black, US 4,835,621 in view of Katayama, US 5,294,978 as applied to claim 1 above and further in view of Scerbo, US 5,546,124.**

Re claim 15, Black in view of Katayama fails to teach the limitations of:

storing date and time information within said semiconductor memory in association with at least some of video image data as claimed. However, Scerbo teaches storing time and date information along with the recorded video data (col. 11, lines 12-23).

Taking the combined teaching of Black, Katayama and Scerbo as a whole, it would have been obvious to modify Black in view of Katayama to store time and date information along with recorded video data for the benefit of enabling fast access of selected portion(s) of recorded video data for analysis purposes.

**11. Claims 16-18, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black, US 4,835,621 in view of Katayama, US 5,294,978.**

Re claim 16, Black discloses a data recording device for preserving video image data representative of a video image corresponding to an area generally surrounding the target line of a weapon (figs. 1-14, col. 1, line 5-10, col. 2, line 62 – col. 3, line 27), comprising:

a weapon discharge sensor operative to generate a weapon discharge sensor output signal upon at least one discharge of said weapon (col. 3, line 11-26);

at least one semiconductor memory and a video camera operative to repeatedly generate video image data representative of said video image (in Black, col. 3, lines 11-15, when video recording starts, image data will be repeatedly generated by the video camera).

Black does not call for a semiconductor memory as a recording medium as claimed. Instead, a tape cassette serves as a recording medium (col. 7, line 29-30). Katayama however, makes it well known and uses a semiconductor memory (i.e. DRAM) as a recording medium in a system that temporally acquires sequences of images for analysis (fig. 1:32, also col. 3, line 29 – col. 4, line 31). Katayama further makes it well known and suggests the benefit of using the disclosed system utilizing said DRAM for the study of kinetics of one or more bodies or particles, including ballistics.

Taking the combined teaching of Black and Katayama as a whole, one skilled in the art would have found it obvious to replace the tape cassette in Black with the DRAM memory in Katayama as an alternative recording medium in a firearm environment for the benefit of ballistics analysis. The advantages of using digital memory over tape

cassette are also well documented in the related fields such as smaller size, fast access, random access, more robust in data preservation, to name a few.

For the limitations of:

a controller operative to cause the storage of digital data representative of said video image data within said semiconductor memory at predetermined times both before and after the generation of said weapon discharge output signal; said controller being further operative to preserve selected digital data stored in said at least one semiconductor memory in response to said weapon discharge sensor output signal (in Black, fig. 14, col. 3, lines 11-15, col. 7, lines 39-47, video recording onto the tape is the process of preserving video image data, and it is being controlled by the control device 104; Black in view of Katayama would have taught data preservation in a semiconductor memory; video recording at predetermined times both before and after the generation of said weapon discharge output signal is also taught in Black in view of Katayama, see Katayama, col. 4, line 23-31).

Re claim 17, the data recording device of claim 16 wherein said weapon comprises a gun. (See Black, fig. 1).

Re claim 18, the data recording device of claim 16 wherein said controller is operative to preserve at least some of said digital data stored within said at least one semiconductor memory prior to generation of said weapon discharge sensor output signal and some of said digital data stored within said semiconductor memory following detection of said weapon discharge sensor output signal.

(The limitations as claimed have been analyzed and rejected w/r to claim 16 above).

Re claim 24, the data recording device of claim 16 wherein said at least one semiconductor memory comprises at least one dynamic random access memory. (The limitations as claimed have been analyzed and rejected w/r to claim 16 above).

**12. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Black, US 4,835,621 in view of Katayama, US 5,294,978 as applied to claim 16 above and further in view of Koen, US 5,616,863.**

Re claim 19, Black in view of Katayama fails to teach the limitations of:

wherein said weapon discharge sensor comprises an accelerometer mechanically coupled to said data recording device as claimed. However, Koen makes it well known and discloses the use of low cost, compact, and highly reliable mounting of an accelerometer chip as a means for activating a trigger signal commonly used for air bad deployment in a vehicle (col. 1, line 48-52, col. 3, line 25-27).

Taking the combined teaching of Black, Katayama and Koen as a whole, one skilled in the art would have found it obvious to replace a signal generator for generating a signal in response to the pull of the trigger as disclosed in Black (col. 3, line 11-15) with an accelerometer in Koen as an alternative sensing means for sensing the discharge of said weapon. Using the accelerometer chip of Koen in a firearm environment would have provided the benefits of a low cost, compact, and highly reliable mounting of said accelerometer chip as a means for activating a trigger signal

(col. 1, line 48-52, col. 3, line 25-27) since the firearm would have required a compact trigger sensing means.

**13. Claims 20-23, 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black, US 4,835,621 in view of Katayama, US 5,294,978 as applied to claim 16 above and further in view of Andersson et al, US 5,991,043.**

Re claim 20, Black in view of Katayama fails to teach the limitations of:

wherein said weapon discharge sensor comprises a microphone as claimed. However, Andersson makes it well known and uses a microphone for detecting activation of the trigger of a weapon (col. 6, line 54-57).

Taking the combined teaching of Black, Katayama and Andersson as a whole, one skilled in the art would have found it obvious to replace a signal generator for generating a signal in response to the pull of the trigger as disclosed in Black (col. 3, line 11-15) with a microphone in Andersson as an alternative sensing means for sensing the discharge of said weapon. Using the microphone as taught in Andersson would have been merely an obvious design preference over the signal generator in Black which yields no finding unexpected in the prior art.

Re claim 21, the data recording device of claim 20 wherein said weapon includes a trigger and said weapon discharge sensor comprises a switch coupled to said trigger of said weapon.

(The limitations as claimed have been analyzed and rejected w/r to claims 5, 16 and 20 above. In Black, the "switch" is the activation and deactivation of the video camera recorder. See col. 3, line 3-6).

Re claim 22, the data recording device of claim 21 wherein said controller is operative to cause the storage of said digital data within said at least one semiconductor memory periodically.

(The limitations as claimed have been analyzed and rejected w/r to claims 7, 16 and 20-21 above. Furthermore, Black in view of Katayama would have utilized a circular memory in which old video data are overwritten with new video data. Thus, a cycle of said circular memory would have stipulated storage of digital data periodically).

Re claim 23, the data recording device of claim 22 wherein said controller is operative to preserve digital data associated with each of said weapon discharge sensor output signals in a separate portion of said at least one semiconductor memory.

(The limitations as claimed have been analyzed and rejected w/r to claims 8, 16 and 20-22 above. Furthermore, Black teaches storing video data in response to a triggering signal, see col. 3, line 3-27. Black in view of Katayama teaches storing respectively portions of image data prior to and after the instant of the triggering signal, see Katayama, col. 4, line 25-31. Thus, each triggering signal would have resulted in storing video data associated with that particular triggering signal).

Re claim 25, the data recording device of claim 22 wherein said at least one semiconductor memory comprises at least one dynamic random access memory and a non-volatile memory, said controller is operative to store said digital data within said

dynamic random access memory periodically and said controller is further operative in response to said weapon discharge sensor output signal to cause selected digital data stored within said dynamic random access memory to be read from said dynamic random access memory and stored within said non-volatile memory.

(The limitations as claimed have been analyzed and rejected w/r to claim 13, 16 and 20-22 above. Furthermore, Black in view of Katayama teaches a buffer, see Katayama, fig. 1:40. It is unclear whether the buffer is a non-volatile memory due to the lack of detail. However, Examiner takes Official Notice to note that non-volatile memories are well known and used in the art and would have been obvious to utilize as a buffer which yields no finding unexpected in the prior art).

Re claims 26-28, Official Notice is taken to note that nonvolatile memory such as flash memory, bubble memory and erasable programmable random access memory are notoriously well known and used in the art and hence, would have been obvious to use as alternative means for video data recording which yields no finding unexpected in the prior art.

**14. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black, US 4,835,621 in view of Katayama, US 5,294,978 as applied to claim 16 above and further in view of Scerbo, US 5,546,124.**

Re claim 29, Black in view of Katayama teaches a bidirectional communication interface to receive switch commands (see Black, col. 7, line 67 – col. 8, line 40). However, the combined teaching fails to teach the limitations of:

a read command having a specified password on said interface to transmit digital data preserved within said at least one semiconductor memory over said interface as claimed. However, Scerbo teaches the use of codes or passwords in order to gain access to video data which have been stored on a recording medium (col. 6, lines 35-44).

Taking the combined teaching of Black, Katayama and Scerbo as a whole, it would have been obvious to modify Black in view of Katayama to utilize password protected mechanism for the benefit of securing the data stored in the semiconductor memory.

Re claim 30, Black in view of Katayama teaches a bidirectional interface as noted in claim 29 above. However, it is unclear whether the interface is a serial interface as specifically claimed. Examiner takes Official Notice to note that bidirectional serial interface is notoriously well known and used in the art and hence, would have been obvious to use as a design preference which yields no finding unexpected in the prior art.

**15. Claims 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black, US 4,835,621 in view of Katayama, US 5,294,978 as applied to claim 16 above and further in view of Scerbo, US 5,546,124.**

Re claim 31, Black in view of Katayama fails to teach the limitations of:

an enable sensor coupled to said controller, wherein said enable sensor is operative to produce a signal having a first state when said weapon is disposed within a

holster and said enable sensor is operative to produce a signal having a second state when said weapon is not disposed within said holster, and said controller is operative to cause the storage of said digital data within said at least one semiconductor memory only when said enable sensor signal is in said second state as claimed. However, Scerbo makes it well known and obvious the arrangement as claimed (fig. 2, col. 9, line 26-43, col. 11, line 8-23).

Taking the combined teaching of Black, Katayama and Scerbo as a whole, it would have been obvious to modify the triggering mechanism of Black in view of Katayama based on the teaching of Scerbo in order to initiate the video recording when the weapon is moved to a drawn state. This would allow for better power utilization of the device to have it in an on state only when the weapon has the potential of being used.

Re claim 32, the data recording device of claim 31 wherein said enable sensor comprises a switch. The combined teaching of Black, Katayama and Scerbo would have taught said switch as claimed (See Scerbo, fig. 2, col. 9, line 26-43, col. 11, line 8-23).

Re claims 33-34, Black in view of Katayama and Scerbo fails to teach a magnetically actuatable switch comprises a magnetically actuatable reed switch as claimed. However, Examiner takes Official Notice to note that a magnetically actuatable reed switch is notoriously well known and used in the art and hence, would have been obvious to use as a design preference because of proximity sensing. This proximity

sensing would have been advantageous for the application of placing the gun in the holster to sense the video recording state.

Re claim 35, Black in view of Katayama fails to teach the limitations of:

a clock operative to generate date and time information; a character generator operative to generate digital representations of said date and time information; and said controller being operative to store at least some of said digital representations of said date and time information within said at least one semiconductor memory in association with selected video image data as claimed. However, Scerbo teaches storing time and date information along with the recorded video data (col. 11, lines 12-23).

Taking the combined teaching of Black, Katayama and Scerbo as a whole, it would have been obvious to modify Black in view of Katayama based on the teaching of Scerbo to store time and date information along with recorded video data for the benefit of enabling fast access of selected portion(s) of recorded video data for analysis purposes.

**16. Claims 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama, US 5,294,978.**

Re claim 36, Katayama discloses a data recording device for preserving data (fig. 1, Summary of the Invention), comprising:

a sensor configured to detect an occurrence (46, col. 4, line 13-31);

a memory configured to store at least one of audio and video data such that later stored data is recorded over previously stored data (32, col. 3, line 42-55).

Katayama is silent on storing also audio data as claimed. However, Examiner takes Official Notice to note that recording both video and audio on a memory medium is notoriously well known and used in the art and would have been obvious to configure the memory in Katayama to store video and audio data for the benefit of an audio record associated with video analysis.

For the limitation of:

a non-volatile memory (see fig. 1:40), Katayama discloses a buffer. It is unclear whether the buffer is a non-volatile memory due to the lack of detail. However, Examiner takes Official Notice to note that non-volatile memories are well known and used in the art and would have been obvious to utilize as a simple matter of design which yields no finding unexpected in the prior art.

For the limitation of:

a controller configured to transfer the data stored in the memory to the non-volatile memory based on the detection of the occurrence by the sensor (see col. 3, line 64 – col. 4, line 12).

Re claim 37, the data recording device of claim 36, wherein the controller is further configured to transfer the data stored in the memory which corresponds to a period of time beginning prior to the detection of the occurrence by the sensor and ending subsequent to the detection of the occurrence by the sensor. (See col. 4, line 12-31, especially line 27-32).

Re claim 38, the data recording device of claim 36, wherein: the occurrence is a first occurrence; the sensor is further configured to detect a second occurrence; and the

controller is further configured to transfer the data stored in the memory which corresponds to a first period of time beginning prior to the detection of the first occurrence by the sensor and ending subsequent to the detection of the first occurrence by the sensor, and to transfer the data stored in the memory which corresponds to a second period of time beginning prior to the detection of the second occurrence by the sensor and ending subsequent to the detection of the second occurrence by the sensor to the non-volatile memory based on the detection of the second occurrence by the sensor. (See col. 3, line 42 – col. 4, line 32). Katayama discloses the memory 32 may operate as a circular memory, meaning that old data may be overwritten with new one until it is stop by a trigger signal (see col. 4, line 43-51). Katayama also discloses that motion analysis 10 dictates video trigger 46 to stop recording so that image frames before and after the triggering event may be stored in the memory 32 (see col. 4, line 13-29). During the recording cycle, image frames stored in memory 32 may be displayed by transferring several frames at a time to the buffer 40 (see col. 3, line 64 – col. 4, line 7). Katayama discloses that image frame recording may start again by the trigger circuit (see col. 4, line 29-31). When recording restarts, the next trigger signal to stop recording would qualify as "a second occurrence". Certainly, image frames transfer from memory 32 to buffer 40 for display would have occurred prior to the second trigger signal to stop recording.

**17. Claims 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama, US 5,294,978 as applied to claim 36 above and further in view of Golubic, US 5,026,158.**

Re claim 39, Katayama fails to teach the data recording device comprising: a portable housing having the sensor, the memory, the non-volatile memory, and the controller disposed therein as claimed. However, Golubic teaches such convention (figs. 1 & 8, col. 4, line 5-23).

Taking the combined teaching of Katayama and Golubic as a whole, it would have been obvious to configure the data recording device of Katayama comprising: a portable housing having the sensor, the memory, the non-volatile memory, and the controller disposed therein as taught by Golubic for the purpose of ballistic analysis as suggested by Katayama (col. 4, line 65).

Re claim 40, the combined teaching of Katayama and Golubic would have provided the data recording device comprising: a weapon; wherein the occurrence is the firing of the weapon as claimed because Katayama suggests ballistic analysis in his patent (col. 4, line 65), and Golubic teaches a video data recording system mounted on a firearm (see fig. 1). The occurrence is taught in Golubic as the activation of the trigger of said firearm (col. 4, line 23-31).

## Contact

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu Le whose telephone number is (571) 272-7332. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. Customer Service can be reached at (571) 272-2600. The fax number for the organization where this application or proceeding is assigned is (571) 273-7332.

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